



AMD Élan™SC310 Microcontroller



PRODUCT BRIEF

The AMD® Élan™SC310 Microcontroller: The Low-Cost Answer for Embedded PC/AT Designs

The AMD® Élan™SC310 microcontroller is the answer to many designs that require a low-cost PC/AT solution. Specifically targeted for the embedded PC market, the ÉlanSC310 microcontroller is based upon the proven ÉlanSC300 microcontroller design.

Built around a 33-MHz, static, low-voltage, Enhanced Am386® CPU with PC/AT system logic, the ÉlanSC310 microcontroller is a low-cost solution with specific features and peripheral logic integrated into a single chip for embedded PCs.

PRODUCT HIGHLIGHTS

Highly Integrated Design

- Optimized for embedded PC systems
- Combines Am386 CPU with memory controller, PC/AT controllers, and essential peripherals

Integrated PC/AT Chip Set and Peripherals

- Memory controller supports 16-Mbyte DRAM/FLASH/ROM
- PC/AT-compatible versions of 8254, 2x8259A, 2x8237A
- ISA bus controller
- 16C450-compatible UART
- EPP-compatible parallel port
- 146818A-compatible RTC
- CPU local bus access

Enhanced Am386 CPU

- 33-MHz operating frequency at 3.3 V
- Low-power, fully static design for long battery life

Built-In Power Management

- Multiple operating modes: full speed, low speed, doze, sleep, suspend
- Full control of system and internal peripheral clocks
- Supports suspend refresh of DRAMs
- PLL technology for clock generation

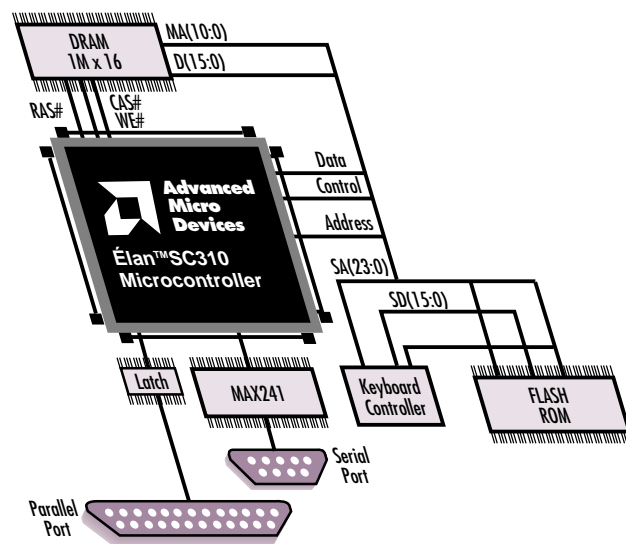
PRODUCT DESCRIPTION

The ÉlanSC310 microcontroller for embedded PC applications is a highly integrated, low-voltage, single-chip implementation of a high performance, 32-bit, x86-compatible microprocessor, with the extra logic needed for PC/AT-compatible systems. It is ideal for embedded PCs and other 32-bit x86 applications. It combines an Am386 CPU core with a memory control unit, ISA bus controller, and peripheral control logic, including PC/AT-compatible versions of the 146818A real-time clock, 8254 timer, 2x8237A DMA controllers, 2x8259A PICs, EPP parallel port, and 16450 UART.

Its highly integrated processor inherently requires less power. The ÉlanSC310 microcontroller is manufactured in a low-power, 3.3-V submicron CMOS process. Utilizing on-board Phase Lock Loops (PLL) reduces power to enable micro amps in the suspend state and enables 33-MHz system speeds from a single 32-kHz watch crystal. The five-state Power Management Unit (PMU) permits complete control, from full speed to suspend.

The ÉlanSC310 microcontroller runs software on *the* open computing standard—the PC/AT architecture. It is both DOS and Windows® compatible and supports popular operating systems such as Windows from Microsoft®, GEOS from Geoworks, and Winlight from Datalight. BIOS support is provided by a number of industry leaders, including Phoenix, SystemSoft, General Software, and AML.

All of these features and benefits are squeezed into a 208-pin plastic quad flat pack package. Functions that require additional chips on traditional processors are built into the ÉlanSC310 microcontroller. Fewer supporting devices result in a smaller, lighter, and more cost-effective product. The ÉlanSC310 microcontroller is the first step in the journey to differentiation, market share, and increased profitability.



Related Literature:

E86 Family Comparative Features Chart	#19257
E86 Family Products Brochure	#19181
FusionE86 SM Catalog	#19255
ÉlanSC310 Data Sheet	#20668
ÉlanSC310 Programmer's Reference Manual	#20665

AMD and Am386 are registered trademarks of Advanced Micro Devices, Inc.
Élan and E86 are trademarks of Advanced Micro Devices, Inc.
Windows is a registered trademark of Microsoft Corp.
Other product names may be registered trademarks of their respective companies.

AMD

One AMD Place
P.O. Box 3453
Sunnyvale, California 94088-3453

APPLICATION HOTLINE &
LITERATURE ORDERING
USA (800) 222-9323
Japan 3346-7550
UK & Europe 44-(1)256-811101

EPD TECHNICAL SUPPORT
USA (800) 2929-AMD
Japan 0031-11-1163
UK 1-800-89-1455

<http://www.amd.com>



RECYCLED & RECYCLABLE

20666A
LIT-10M-3/96-0